striping die; that is to say, if the striping die is changed in the manner heretofore described in order to substitute therefor a die of a different width, at the same time the hopper will be changed to provide a discharge of reflective material the width whereof is slightly in excess of the width of the stripe deposited by the substituted striping die.

As is clear from the drawings the hopper is so located in back of the striping die as to overlap transversely the path followed by the discharge end of the striping die, thereby insuring full coverage of deposit of reflective material on the newly laid stripe of the hot fluid plastic substance.

The rate of discharge of the reflective particulate material from the hopper is controlled by the use of a suitable mechanism, so that there will not be a continuous free discharge, however small, of said material. For this purpose there is located in the hopper at the bottom thereof an elastomeric distributor roller 194 which is disposed immediately above the exit zone 192 and centrally between the bottom wall portions 189, 190. The distributor roller is secured on a transverse shaft 195 the ends of which are journalled in the side walls of the hopper. The shaft is so positioned in the hopper and the diameter of the distributor roller is so selected that the roller will lightly brush against both bottom wall portions 189, 190, thus effectively blocking flow of reflective material from the hollow interior of the hopper to the exit zone 192. However, it will be appreciated that when the roller is turned in the direction A it will, due to its elastic nature, carry between it and the bottom wall portion 189 reflective material from the mass 188 thereof in the hopper to the zone of discharge from the hopper.

To turn the distributor roller, one end of the shaft 195 extends a substantial distance beyond the side wall of the hopper, as at 196 (FIG. 19) and has mounted thereon one half 197 of a clutch. The clutch conveniently is of the multi-toothed radially splined type. The other half 198 of the clutch (see FIGS. 1, 11, 12 and 13) is dimensioned and shaped to engage the half 197. This arrangement enables the roller 194 to be easily deenergized so that an operator can selectively deposit or withhold the reflective material.

The clutch half 198 is carried by a sleeve 199 slidable on a drive shaft 200. Said drive shaft is formed with axial keyways (not shown) and the internal bore of the sleeve 199 is provided with splines (not shown) that ride in the keyways so as to permit the sleeve to be shifted axially of the shaft 200. In one position of the sleeve the clutch half 198 formed at an end thereof meshes with the clutch half 197, this position being illustrated in FIGS. 1, 11 and 19. In the other extreme position of the sleeve, the two clutch halves are decoupled as shown in FIG. 13.

To move the sleeve between its two extreme positions corresponding to engaged and disengaged conditions of the clutch, there is provided a manipulating linkage the operative end of which constitutes a control rod 201 (see FIG. 1). At its lower end the rod is formed with a forwardly extending arm 201*a* suitably journaled, as in bearings 202, thereby permitting the control rod to be swung laterally. The front end of the arm carries a transversely extending radius arm 203 which runs from the arm 201*a* toward the clutch half 198 and terminates short thereof. When the control rod 201 is erect the radius arm 203 is horizontal, as shown in FIG. 12. However, when the control rod is shifted away from its erect position to either side, the radius arm 203 will be swung away from horizontal position, as shown in FIG. 13.

The sleeve 199 is formed with a transverse annular groove 204 in which ride a pair of diametrically opposed pins 205 that are mounted on the opposite arms of a yoke 206 straddling the sleeve in the vicinity of the groove. The yoke is pivotally connected to one end of a link 207 the other end of which is pivotally connected to the swinging end of the radius arm 203. It now will be apparent that when said radius arm 203 is horizontal, it will force the two halves of the clutch into meshing engagement and that when said radius arm is inclined, it will pull the clutch half 198 away from the clutch half 197.

The drive shaft 200 is suitably journalled in bearings 208 mounted on the frame of the striper as with the aid of brackets 209 (see FIG. 18). Said shaft has secured thereto a sprocket 210 (see FIGS. 18 and 19) which engages a chain 211 that is trained around another sprocket 212 fastened to the front wheel axle 32. Thereby, so long as the two clutch havles are interengaged, movement of the striper forwardly will cause a corresponding movement of the roller 194 and therefore discharge of reflective material down the chute 191 and onto the still tacky freshly deposited plastic stripe.

It has been ascertained that reflective material thus deposited on the still soft stripe becomes firmly embedded in and secured thereto and will remain in place and effective for very long periods of time, despite the heavy passage of traffic.

The term "hot-fluid" as used herein denotes a material which is fluid when hot and is to be distinguished from the expresson "hot, fluid" which simply indicates that a certain material at a given time is hot and also is fluid.

It thus will be seen that I have provided a road striper which achieves the various objects of my invention and is well adapted to meet the conditions of practical use.

As various possible embodiments might be made of the above invention and as various changes might be made in the embodiment above set forth, it is to be understood that all matter herein described or shown in the accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

Having thus described my invention I claim as new and desire to secure by Letters Patent:

In a road striper for marking a heat-plasticizable road surface which striper includes a tank for receiving a striping compound and a wheeled support for said tank: a horizontal rod, a trough mounted to turn about said rod and having an open discharge end, a spring biasing the discharge end of the trough downwardly, a doctor valve, means mounting said doctor valve for movement toward and away from the discharge end of the trough, said means including wear surfaces adapted to ride on a road surface, a toggle mechanism having one end pivoted to the trough and the other end pivoted to the doctor valve, spring means biasing the opposite ends of the toggle mechanism together, said toggle mechanism being extendable to a position in which a central pivot point thereof passes between the opposite ends of said mechanism so as to lock the toggle mechanism in open position, and a discharge conduit for leading compound from said tank to said trough.

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